

**HIGH MELT-STRENGTH POLYOLEFIN COMPOSITES AND  
METHODS FOR MAKING AND USING SAME**

5

**ABSTRACT**

The invention includes a process for preparing an improved melt-strength polyolefin blend by incorporating a polyolefin/clay nanocomposite product. The nanocomposite-modified polyolefin blend is used to form articles through processing operations that involve stretching and/or drawing, such as thermoforming, melt spinning, blow molding and foaming. The addition of the nanocomposite product to the polyolefin blend improves the sag resistance of the polyolefin and broadens the processing window of the operation.

2025 RELEASE UNDER E.O. 14176